WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

By F. A. YOUNG

January is normally the stormiest month of the year over the North Atlantic. During the current month, however, the number of days with gales was considerably less than usual over the greater part of the ocean. The largest number of gales occurred over the region between the Bermudas and Maritime Provinces, where they were reported on from 2 to 5 days, while according to reports received, they did not occur on more than 4 days in any other 5° square.

As shown by Table 1, the average pressure at land stations in eastern Canada and Newfoundland was considerably below normal, while the North Atlantic HIGH was apparently well developed.

As in December, the number of days with fog was below the normal over practically the entire ocean. The maximum amount occurred in the square that includes the east coast of Newfoundland, where it was reported on seven days. Over the Grand Banks it was reported on from 4 to 5 days; over the steamer lanes, east of the fortieth meridian, on not more than one day in any 5° square; along the American coast, between the thirtieth and forty-fifth parallels, on from one to two days; in the Gulf of Mexico, on from one to two days.

Barometric data for several island and coast stations are given in the following table:

TABLE 1.—*Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian). North Atlantic Ocean, January, 1931*

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	*Inch*	*Inches*		*Inches*	
Julianehaab, Greenland	29.54	(1)	30.28	11th	28.74	26th.
Belle Isle, Newfoundland	29.80	−[2] 0.20	30.10	6th [3]	28.98	17th.
Halifax, Nova Scotia	29.82	−[4] 0.16	30.28	19th	28.92	7th.
Nantucket	29.96	−[4] 0.09	30.34	25th	29.22	31st.
Hatteras	30.08	−[4] 0.06	30.50	16th	29.22	6th.
Key West	30.10	−[4] 0.01	30.36	15th	29.84	5th.
New Orleans	30.19	+[4] 0.03	30.60	15th	29.68	5th.
Cape Gracias, Nicaragua	29.94	−[2] 0.04	29.98	2d [4]	29.90	5th.[3]
Turks Island	30.10	+[2] 0.05	30.22	16th	30.00	6th.
Bermuda	30.06	−[4] 0.10	30.28	18th [3]	29.76	7th.[3]
Horta, Azores	30.23	+[2] 0.13	30.66	15th [3]	29.44	2d.
Lerwick, Shetland Islands	29.62	−[2] 0.08	30.48	7th	28.66	23d.
Valencia, Ireland	29.97	+[2] 0.07	30.53	9th	29.35	31st.
London	29.91	−[2] 0.09	30.52	7th	29.20	1st.

[1] No normal available.
[2] From normals shown on Hydrographic Office Pilot Charts, based on observations at Greenwich mean noon, or 7 a. m., 75th meridian time.
[3] And on other date or dates.
[4] From normals based on 8 a. m. observations.

Charts VIII to XI cover the period from the 1st to 4th, inclusive, and Charts XII and XIII show the conditions on the 10th and 11th, respectively. These two latter charts were drawn to give an idea of the weather encountered by the ill-fated airplane *Tradewind* that took off from Bermuda for the Azores on the morning of the 10th and was lost at sea.

On the 5th moderate conditions prevailed over the greater part of the ocean, although the land stations at Tampico and Vera Cruz, Mexico, reported northerly winds, force 7 and 8, respectively, with a barometric reading of 30.14 inches at both stations. On this date there was a depression over the northern section of the Gulf of Mexico, with a barometric reading of 29.60 inches at Pensacola that afterwards developed into a severe disturbance as it moved northeastward along the coast.

On the 6th this LOW was central near New York, where the barometer read 28.96 inches; on the 7th it was over the Maritime Provinces, barometer at Halifax 28.92 inches; on the 8th central near Belle Isle, barometer 29.03 inches. This disturbance reached its greatest extent and intensity on the 7th, when the storm area extended from the thirtieth to forty-fifth parallels, west of the fiftieth meridian, and winds of force 10 to 12 were reported by vessels during this period from the 6th to 8th. During this same period there was also a LOW that remained nearly stationary in the vicinity of the Azores, accompanied by moderate to whole gales, and on the 8th the station at Horta reported, wind NE, 11, barometer 29.58 inches. By the 9th this LOW had apparently filled in, as there are no signs of it on the chart for that day.

On the 9th a depression was central about 300 miles northwest of Bermuda that moved northward, increasing in intensity, and on the 10th was central near Sydney, Nova Scotia. On the 10th and 11th the region between the thirty-fifth and forty-fifth parallels was swept by gales from nearly all points of the compass, reaching hurricane force at times.

From the 12th to 14th moderate conditions prevailed over the greater part of the ocean, although vessels in widely separated localities reported winds of force 7 and 8.

From the 15th to 17th there was another active disturbance between the Bermudas and fiftieth parallel that reached its greatest intensity on the 16th, when central near 42° N., 54° W. Reports from vessels involved are given in table of gales and storms. On the 17th southerly gales were also reported by vessels over the middle section of the steamer lanes, and northwesterly winds of force 7 and 8 by vessels in the vicinity of and at land stations on the British Isles.

On the 20th a LOW was off the west coast of Cuba, with winds of a maximum force of 10, as shown by report in table. This disturbance moved slowly northward, gradually filling in, and on the 21st moderate weather prevailed along the American coast, except that one vessel near Nassau encountered a northerly wind, force 7.

On the 21st a disturbance was central near 51° N., 38° W., that moved slowly eastward, and by the 24th and 25th was over the North Sea.

On the 26th and 27th gales also occurred between the thirtieth and fiftieth parallels and the thirtieth and forty-fifth meridians.

On the 28th and 29th a depression over the British Isles was responsible for moderate westerly and northwesterly gales over a limited area between the coast and twentieth meridian.

On the 30th Halifax was near the center of a LOW that on the 31st was central near Belle Isle, and on both dates westerly to northwesterly gales were encountered by vessels between the thirty-fifth and fiftieth parallels, west of the forty-fifth meridian. On the 31st moderate southwest gales were also reported by land stations on the south coast of England.

NOTE—American steamship *Carplaka*, Capt. A. J. Griggs; observer, A. Rasmussen. From New York to Copenhagen:

On January 23, 1931, at 2.30 p. m., in latitude 57° 09′ N., longitude 23° 42′ W., observed a waterspout traveling from NW. to SE., overtaking vessel and crossing bow, vanishing in horizon in about 10 minutes. It appeared like dark smoke whirling apparently in a clockwise direction and extending about 100 feet above surface. Ship was steaming 74°, 13.5 knots an hour. This occurred during a hail squall of short duration, weather being clear with passing squalls. Barometer read 29.07 inches, air 39°, water 49°, wind WNW., 5, sea WNW, moderately rough.